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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,127	01/30/2004	Ping Mei	200209576-1	8740
22879	7590	03/13/2008		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER				
TRAN, THANH Y				
ART UNIT		PAPER NUMBER		
2892				
NOTIFICATION DATE		DELIVERY MODE		
03/13/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/769,127

Applicant(s)

MEI, PING

Examiner

THANH Y. TRAN

Art Unit

2892

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 11, 12, 21 and 24-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 13, 14 and 17 is/are rejected.
- 7) ☒ Claim(s) 2, 4-10, 15-16, 18-20, 22-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Dai (U.S. 5,877,076).

As to claim 1, Dai discloses in figures 3i-3k a method for forming a semiconductor device comprising: forming a 3-dimensional pattern (see 161' and 151' in figure 3i) in a substrate (110); and depositing at least one material (180) over the substrate (110) in accordance with desired characteristics of the semiconductor device. It should be noted that: elements 161' and 151' inherently create a 3-dimensional pattern in a substrate so that the material 180 can be deposited within a 3-dimensional pattern.

As to claim 13, Dai discloses in figures 3i-3k a system for forming a semiconductor device comprising: means for forming a pattern (see 161' and 151' in figure 3i) in a substrate (110) wherein the pattern is 3-dimensional; and means for depositing at least one semiconductor material (180) over the substrate (410) in accordance with desired characteristics of the semiconductor device.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dai (U.S. 5,877,076) in view of Taussig et al (U.S. 6,861,365).

As to claims 3, 14, and 17, Dai does not disclose the semiconductor device comprises a cross-point memory array or at least one of a transistor, a resistor, a capacitor, a diode, a fuse and an anti-fuse.

Taussig et al discloses in figures 1, 2a-2b, and 4a-5 a method for forming a semiconductor device, wherein the semiconductor device comprises a cross-point memory array (see col. 3, lines 61-67); or at least one of a transistor, a resistor, a capacitor, a diode, a fuse and an anti-fuse (see claim 8 and col. 4, lines 14-20). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Dai by having a semiconductor device which comprises a cross-point memory array or at least one of a transistor, a resistor, a capacitor, a diode, a fuse and an anti-fuse as taught by Taussig et al for the purpose of intended use.

Allowable Subject Matter

5. Claims 2, 4-10, 15-16, 18-20, and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 12/11/2007 have been fully considered but they are not persuasive.

Applicant argued that Dai reference does not disclose forming a 3-dimensional (3D) pattern in a substrate.

In response, the examiner disagrees with applicant's argument because figures 3i-3k of Dai clearly discloses an apparatus and a corresponding method comprising: forming a 3-dimensional (3D) pattern (see elements 161' and 151' in figure 3i) in a substrate (110). Applicant should note that: elements 161' and 151' inherently create a 3-dimensional pattern in a substrate so that the material 180 can be deposited within a 3-dimensional pattern. And with respect to the Merriam-Webster's Dictionary, 10th Edition, the term "in" is defined as a function word to indicate inclusion, location, or position within limits. And Dai reference does disclose that a 3-dimensional (3D) pattern positioned within limits of the substrate (110).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (571) 272-2110. The examiner can normally be reached on M-F (9-6:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao X Le, can be reached on 571-272-1708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/T. Y. T./
Examiner, Art Unit 2892

/Thao X Le/
Supervisory Patent Examiner, Art Unit 2892

